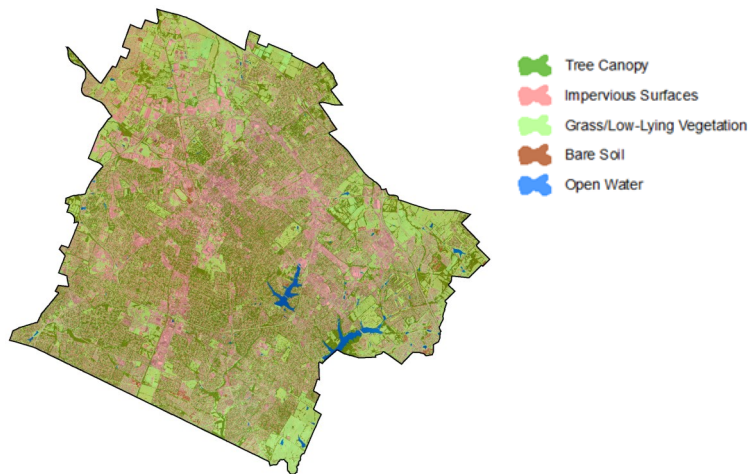




Lexington, Kentucky - Urban Tree Canopy Assessment

Five-Class Land Cover Distribution for the Urban Service Area (referenced 2012 NAIP imagery)



Tree Canopy Goal Setting

Establishing tree canopy goals is essential for communities that want to create a sustainable urban forest and increase the stormwater, air quality, energy use reduction, quality of life, and other benefits trees provide. Appropriate tree canopy goals should be set for all areas of Lexington; from the entire region down to each neighborhood and business district. Knowing how much urban tree canopy is currently present is the first step in this goal-setting process, followed by determining the desired amount of tree canopy that could practically be established through planting site analysis.

American Forests, a recognized leader in conservation and urban forest management, has established an average canopy goal of 40% for metropolitan areas. The Commonwealth of Kentucky encourages this standard as a general guideline or target for Kentucky communities to achieve.

Lexington's Urban Tree Canopy

Urban trees play an important role in our daily lives; they provide many economic, environmental, and social benefits and significantly improve Lexington's quality of life. Trees reduce the urban heat island effect and help to cool the atmosphere, improve water quality, save energy, reduce stormwater flooding and damage, mitigate air pollution, increase property values, provide wildlife habitat, improve our health, and provide psychological and aesthetic benefits.

The amount of urban tree canopy (UTC) determines how many of these economic, environmental, and social benefits Lexington receives from its trees. UTC is composed of the leaves, stems, and branches of all public and private trees as viewed from above using satellite and aerial images and local geographic information systems (GIS) land cover data. The UTC assessment provides an understanding of the amount and distribution of existing tree cover among other land cover types within Lexington's Urban Service Area.

Lexington's 2012 tree canopy cover is 24.56%. A study completed by the United States Forest Service found Kentucky's statewide tree canopy cover to be at 41.8% and urban area cover to be at 18.6%. A separate study determined that Louisville's metro area had tree canopy cover of 27%. The historical land cover assessment showed Lexington's canopy increased by 5% in the last 18 years. **Data analysis shows Lexington's existing UTC provides an estimated \$30,594,735 in benefits and savings to the community.**

Lexington's 2012 Land Cover Results for the Urban Service

Land Cover	Acres	Percent Land Cover
Tree Canopy	13,420	24.56%
Impervious—Roads, Buildings, Houses, Parking Lots	18,763	34.34%
Pervious—Grass, Low Vegetation, Agricultural Fields, Wetlands	21,470	39.30%
Bare Soils—Ball Fields, Non-Vegetative Ground, Construction Sites	416	0.76%
Open Water—Lakes, Reservoirs, Ponds, Large Rivers	560	1.03%
Total	54,630	100.00%



For more information contact: Lexington-Fayette Urban County Government
Urban Forester Tim Queary 859-258-3404
Arborist Senior John Saylor 859-258-3405



Lexington, Kentucky - UTC-Based Prioritized Planting Plan

Preferred Planting Site Selection

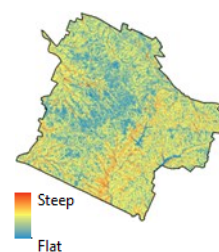
Based on the results of the UTC, a prioritized planting plan was created for Lexington’s Urban Service Area. Only areas that could reasonably be considered for planting were included in the plan—cemeteries, golf courses, agricultural land, and sports fields were not included. Preferred planting areas were assessed by analyzing topography, census data, road networks, urban heat island data, floodplain, soil types, and the current land cover data to locate and prioritize new tree planting areas. The high priority locations should be the focus of new tree planting projects as these are areas where trees will provide the most benefits to the community.

Lexington’s Council District Urban Tree Canopy Assessment

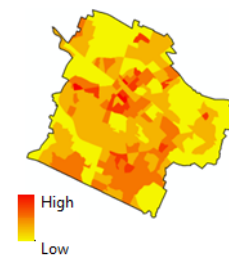
Council District	District Acres	Existing Canopy		Preferred Planting		Maximum UTC	
		Acres	Percent	Acres	Percent	Acres	Percent
1	4,408.25	952.72	21.61	1,439.67	32.66	2,392.39	54.27
2	7,005.42	1,258.94	17.97	2,233.62	31.88	3,492.56	49.86
3	2,608.68	636.85	24.41	601.68	23.06	1,238.54	47.48
4	3,395.53	1,083.73	31.92	995.96	29.33	2,079.69	61.25
5	4,646.86	1,409.97	30.34	1,139.65	24.53	2,549.62	54.87
6	5,778.00	1,301.12	22.52	1,614.12	27.94	2,915.24	50.45
7	4,662.71	1,012.97	21.72	1,704.65	36.56	2,717.61	58.28
8	2,834.72	819.10	28.90	920.04	32.46	1,739.14	61.35
9	4,323.58	1,149.86	26.60	1,329.03	30.74	2,478.89	57.33
10	4,397.31	1,159.54	26.37	1,496.73	34.04	2,656.27	60.41
11	3,393.14	1,011.74	29.82	977.29	28.80	1,989.03	58.62
12	7,174.17	1,621.83	22.61	1,799.89	25.09	3,421.72	47.70
Urban Service Area^	54,630	13,420	24.56%	16,253	29.75%	29,673	54.31%

^Rounding may cause values to be slightly different than the Urban Service Area totals.

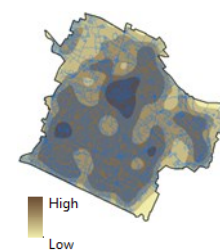
Slope (degrees)



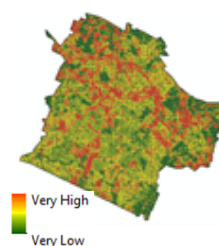
Population Density



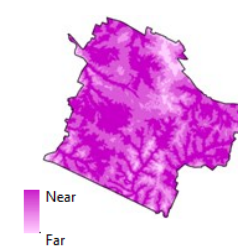
Road Density



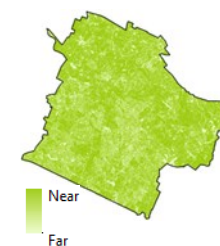
Urban Heat Island



Floodplain Proximity

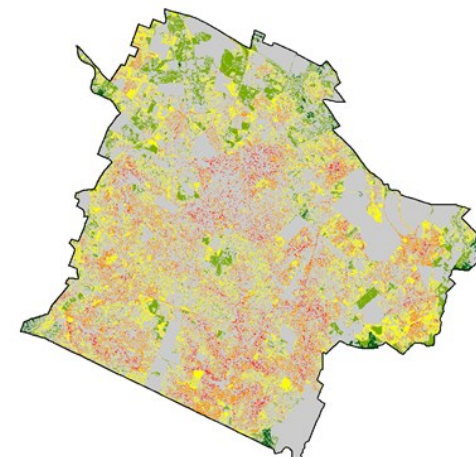


Canopy Proximity



Planting Site Priority Level

Very Low
Low
Moderate
High
Very High



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